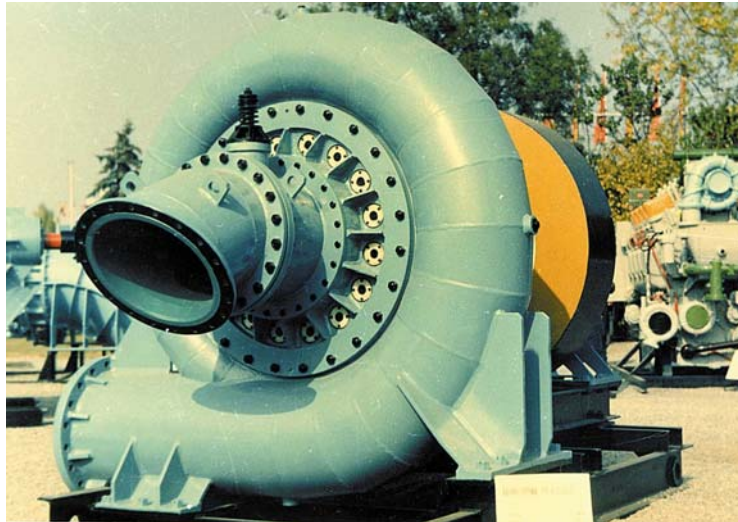


FO 230/720 Turbine

*Development Stage:
Commercially available*



FO Standard Hydropower Unit

Product Description

The FO Series are Francis turbines with a horizontal shaft, metallic spiral case, regulated wicket gate, runner of stainless steel, sealing system, self opening depression valve, radial-thrust slide bearing, bent draft tube at 45° or 90°, flywheel, and a hydraulic brake.

The FO family consists of 5 sizes of Francis turbines: FO 90/390, FO 90/570, FO 125/640, FO 190/720, FO 230/720. The symbol means: F - Francis turbine type, O - horizontal shaft and the specific speed (m-kW) of the turbine model/runner diameter in mm.

The assembly of turbine – flywheel – generator of a hydropower unit with FO turbine is settled on four bearings, with one of the turbine bearings also acting as a thrust bearing. A particular general arrangement is without a flywheel, with assembly on two bearings, of the generators.

Product Highlights		
Standard Unit Design Capacity	675 kW	Design Working Environment <input checked="" type="checkbox"/> Natural waterways <input type="checkbox"/> Water transmission systems <input type="checkbox"/> Effluent streams <input type="checkbox"/> Tidal estuaries <input type="checkbox"/> Near shore ocean <input type="checkbox"/> Off-shore ocean <input type="checkbox"/> Deep ocean <input type="checkbox"/> Other
Other sizes currently available	Yes	
Characteristic Dimension	0.72 m	
Rotational Axis Orientation	Horizontal, perpendicular to flow	

Product Specifications/Details (Standard Unit)

- **Performance Specifications:**

<i>Category</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Units</i>
Flow range	0.85	4	<i>m³/sec</i>
Hydraulic head range	10	89.2	<i>m</i>
Power output range	50	1200	<i>kW</i>
Waterway depth	-	-	<i>m</i>
Waterway width	-	-	<i>m</i>

- **Deployment Locations:** The following sites in Romania:

- | | |
|------------------------|--------------------------|
| - Tesila I - Ploiesti | - Olteti II - Targu Jiu |
| - Tesila II - Ploiesti | - Gura Haiti I - Suceava |
| - Surduc - Timisoara | - Novaci II - Targu Jiu |
| - Cepari - Pitesti | - Novaci III - Targu Jiu |
| - Bistra Noua - Resita | - Novaci IV - Targu Jiu |
| - Tohan I - Brasov | - Novaci V - Targu Jiu |
| - Sadu I - Sibiu | |

- **Operating History:**

- Number of sites where turbine model is in commercial operation: 21
- Years turbine model has been commercially available: 19

Company Contact Information

Company Name	UCM Resita SA
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Company Profile

Years in Business	30 or more years
Number of Employees	51 or more employees
Annual Equipment Sales	\$100,000 - \$1,000,000

Affiliations/Alliances/Credentials/References/Publications

- Caras Severin Chamber of Commerce, Industry & Agriculture
- International Association for Small Hydro (IASH)
- References: SC Hidroelectrica SA, Romanian Commercial Bank - Resita Branch